

Appl. No. 10/043,902
November 17, 2003
Reply to Office Action of August 15, 2003

REMARKS

Reconsideration of the application is respectfully requested.

In the Office Action, all pending claims 76-95 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 5,264,795 ("Rider").

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation for modifying references. Rider discloses a locator apparatus for locating underground pipes or other devices using short distance communication methods through the earth. Rider also discloses that it uses carrier frequency for achieving the communication. There is no motivation in Rider to use any other frequency than the carrier frequency or a modulator other than a carrier frequency modulator. This is so because Rider is not concerned with communicating through the earth to the interior of a mine, which usually involves a long distance communication through the earth with minimum power and energy due to the explosion hazards inside the mines. Further, Rider is not concerned with the amount of energy used.

On the other hand, the single sideband transmission claimed in claims 76-95 uses considerably less energy than a carrier-modulated signal disclosed by Rider. In single sideband transmission, the carrier is not transmitted but is reconstructed in the receiver. Thus, Rider does not disclose, suggest, or teach using single sideband transmission through the earth, for example, to reduce the amount of needed energy.

For at least the foregoing reason, Rider does not disclose, suggest, or teach claims 76-95.

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In addition, Rider does not disclose, suggest, or teach a comb filter as claimed in claims 91 an 92.

This communication is believed to be fully responsive to the Office Action and every effort has been made to place the application in condition for allowance. If a telephone interview would be of assistance in advancing prosecution of the subject application, the Examiner is requested to telephone the undersigned attorney at the number provided below.

Date: November 17, 2003

Respectfully submitted,

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